NATURAL NEWS

The Field Museum
Exploring
The Earth And Its
People

September 15, 1995

CAMPAIGN OFFICE GROWS

We are pleased to announce two new hires for the Campaign Office (Development). Joining **Leo Schwartz,** our new Campaign Manager, will be **Matt Matcuk** (pronounced "Madduck") as campaign writer and **Suzanne Murphy** as department secretary. With these appointments, our Campaign Office, which is the operations center for the Museum's $60 million fund drive, is fully staffed.

Matt Matcuk has worked as an English instructor, an advertising copywriter, and, most recently, as a grants writer for the Chicago Academy of Sciences. His first day will be Monday, September 18.

Suzanne Murphy comes to us from the Alpha Phi Foundation where she was an administrative coordinator for development. She has also worked with the March of Dimes office and as an intern and assistant for two U.S. senators. Suzanne's first day will be Monday, September 25.

Willard E. White
Vice President, Institutional Advancement

➽KNOW YOUR BENEFITS!

Summary Annual Reports will be distributed next week to all staff who participate in any of the Field Museum group benefit plans. The reports are being presented to you in order to meet the requirements of the Employee Retirement Income Security Act (ERISA) as well as to highlight the large investment Field Museum has made on your behalf. The purpose of the Summary Annual Reports is to give you financial information concerning each plan in which you are a participant.

CENTER FOR CULTURAL UNDERSTANDING AND CHANGE

SUMMER FIELD WORK

This summer, **Jonathan Haas** (Anthropology) and **Winifred Creamer** (Anthropology, and Associate Professor at Northern Illinois University), conducted archaeological field work at the site of the Pueblo Blanco in Northern New Mexico. This was part of their long term project looking at the effects of European contact and colonialism on the Pueblo peoples of northern New Mexico in the 15th and 16th centuries A.D. Pueblo Blanco is one of the largest archaeological sites in the Southwest with more than 2,000 rooms arranged in large "apartments" three and even four stories high.

The purpose of the field work this year was to examine both the earliest and the latest occupation at the site. The crew of students from colleges around the U.S. discovered an early occupation at the site going back to around A.D. 1325. These lower rooms with beautifully plastered walls and ash filled hearths were found more than seven feet below the ground surface. In other parts of the site the workers excavated a sample of rooms to determine the condition of the site at the time of final abandonment. It has been theorized that Pueblo Blanco was either destroyed by warfare just prior to the arrival of the Spanish in 1540 or was ravaged by Spanish diseases introduced at about the same time. Haas and Creamer's excavations, however, do not support either of these ideas in that they indicate a site that was gradually, and peacefully, abandoned by people who packed up and moved to a new village.

Haas and Creamer will be working on analysis of the large number of recovered artifacts in the coming year and the results will be published in *Fieldiana*.

REESE RETURNS

David S. Reese (Anthropology) has recently returned from two and a half months in Greece and Cyprus. In Greece he studied fauna from the University of Chicago excavations at Isthmia (a sanctuary site near Corinth) and from several excavations on Crete: Archanes (Greek), Pseira (American), and Mochlos (American). On Cyprus he taught at the Athienou-*Malloura* NSF-sponsored field school, corrected proofs of a monograph being published by the Geological Survey Department of the Republic of Cyprus, and served as a consultant to the new Marine Life and Paleontology Museum in Larnaca.

CENTER FOR EVOLUTIONARY AND ENVIRONMENTAL BIOLOGY

ATTENTION! ALL CEEB AND CCUC RESEARCHERS

The National Science Foundation has revised its **Grant Proposal Guide** (GPG) and **Proposal Forms**. The new information and forms will be required for all proposals submitted on or after **October 1, 1995** (the 1994 dark blue Grant Proposal Guide and forms will be obsolete after that date).

Single copies of the new Grant Proposal Guide (GPG) (**NSF 95-27**) and/or Proposal Forms Kit (**NSF 95-28**) can be ordered **by mail** (addressed to : NSF Forms and Publications Unit, Room P15, 4201 Wilson Boulevard, Arlington, VA 22230); **by FAX** (703 644-4278); or **by e-mail** addressed to pubs@nsf.gov. All requests must include the NSF publication number, the title, your name and a complete mailing address. Note that the GPG also contains the new proposal forms so you don't need to order both.

Please be aware of upcoming NSF Deadlines:

Doctoral Dissertation Improvement Grants (Biological Sciences) - October 13, 1995

Lake Shore Drive
IMPROVEMENT PROJECT

Memorandum to Staff and Volunteers regarding
Lake Shore Drive Relocation / Construction Coordination

Adler Planetarium
Field Museum
Shedd Aquarium

September 12, 1995 / **Memo No. 2**

Most of you have probably noticed by now that changes are beginning to take place in the North Lot. To help you best manage both your own and our visitor's transit to the campus during this period, we will regularly update you as to the construction progress and schedule.

NORTH LOT CHANGES

Beginning Tuesday, September 12th, the North Lot construction begins. Construction will be complete by Monday, October 9th. The North Lot will operate in a new way from September 12th through early 1996. The effects are as follows:

- Taxis, tour and shuttle buses are *no longer allowed to use the north lot* - they are directed to McFetridge Drive instead. Signs are now posted for a taxi stand and tour/shuttle bus stand at the Field Museum south drop-off. If a Field Museum visitor needs a taxi, please direct them to the south door. The other alternative is to cross the drive using the pedestrian tunnel, and catch a cab on Solidarity.

- Staff and visitors now enter and exit the lot from the west side *only*. After September 12, the east exit into northbound LSD will *no longer be permitted*. If you want to leave the lot and go north on LSD, you must exit on the west into the southbound lanes, turn east at McFetridge, and then north onto LSD. Within the lot, traffic flow will be modified - please follow the new pavement markings.

- Approximately 40-50 parking spaces *will be lost*. The tow zone recently created at the diagonal spaces is to allow these spaces to be restriped in the other direction. By Thursday, September 14, they will be put back into use after the restriping.

- *During the actual construction of the slip* (between September 12 and October 9), *conditions will vary* in the lot. Different areas may be cordoned off as curbs are made and the lot is restriped. The lot will remain open for parking during this period, but do anticipate some inconvenience due to the construction. Please be patient - availability of spaces may vary on a day to day basis. You must park in designated spaces *only - DO NOT PARK IN THE AISLES - or you will be towed.* Please respect barricaded areas - they are construction zones and you will be towed if you park in them.

BUS SLIP AT SHEDD AQUARIUM

After November 1st, the Bus slip in front of the Shedd Aquarium will be lengthened. Construction should be complete within 2-3 weeks. The effects are as follows:

- The slip is being lengthened to allow for *both* bus and taxi use during the 1996 construction season, when all traffic (both north and southbound) will be routed along the current northbound lanes.

- During the construction, buses will continue to utilize the slip. *There will be no interruption of bus service.*

LAKE SHORE DRIVE LANE CHANGES

Beginning Tuesday, September 12th, at 9 a.m., modifications of the north and southbound lanes of Lake Shore Drive from Balbo to 35th Street will begin. Work between Balbo and McFetridge will be complete by Monday, October 9, the rest by early November. The modifications are as follows:

- The northbound lanes *will be widened* north of the Field Museum. Portions of the median from Balbo to the Field Museum will be removed. This will involve the closure of the westernmost lane on the northbound side and easternmost lane on the southbound lane only. A temporary barrier wall will be installed to separate the north and south bound lanes.

- The turnaround lane north of the Field North Lot will be constricted due to the adjacent lane closing, but will remain open.

- Northbound lanes along the south end of the Soldier Field south lot will be widened. Various lightpoles along the entire length will be removed.

- The northbound lanes *from Balbo to McCormick Place* will be restriped. The end result will be an increase in the number of lanes. The restriping will entail intermittent lane closures - but never during rush hours. The lane closures will done one lane at a time, and the work area will move around until all lanes are restriped from Balbo to McCormick Place.

COLUMBUS DRIVE CHANGES

Beginning in late September, repaving of Columbus Drive will begin. Construction will be complete by mid November. The modifications are as follows:

- Work will be done alternately on either the outside lanes or the inside lanes. Lanes will remain open to both directions of traffic during the day, with most work occurring at night. The *entire* roadway will be closed only for the final paving, which will be completed in one night. We will give you advance warning of that date.

UTILITY RELOCATIONS

This fall, below roadway utility work will occur in various locations along the southbond lanes of Lake Shore Drive between Balbo and McCormick. The effects are as follows:

- This work will occur only at night.

- Each area of work will either be completed in one night, or backfilled and plated over to allow for traffic passage the next day.

ROOSEVELT ROAD VIADUCT

Beginning late October, and completed by late May (weather dependent), a new viaduct at Roosevelt Road over the Metra tracks will be constructed from Indiana to Columbus Drive. Details on the effects of this construction will be provided in a later memorandum.

THE FIELD MUSEUM
Inter-Office Correspondence

DATE: September 7, 1995

TO: All Colleagues

Dear All:

From the middle of October until the middle of November the Museum will be the location for a motion picture. We have been asked by the City to make ourselves available for this purpose in order to help in the building of the City's movie "location" business which creates much needed employment.

There will be a number of logistical issues connected with the filming that will require planning and patience of all. Carol Konieczny will be the coordinator of the event reporting to Diane White. Filming will be going on outside and inside the building both in public and non-public space.

From time-to-time the location crew will need the north parking lot, and the City will provide alternative free parking on McFetridge.

We will supply you with more details as we know more about the schedule.

I will greatly appreciate your patience and help in this Chicago project.

Sincerely yours,

Sandy

Willard L. Boyd
President

WLB/hpg

Joint NSF/Alfred P. Sloan Foundation Postdoctoral Research Fellowships in Molecular Evolution - November 1, 1995

Biotic Surveys and Inventories - November 13, 1995

Informal Science Education - November 15, 1995

Faculty Early Career Development (CAREER) - December 15

For further information, contact **Barb Harney** (x877) or **Lori Breslauer** (x627) in Academic Affairs.

LANCE GRANDE NEARS COMPLETION OF BOWFIN STUDY

Lance Grande (Geology) is nearing completion of his largest project to date: a National Science Foundation-funded study of a group of primitive ray-finned fishes. He and colleague Willy Bemis, from the University of Massachusetts, are examining the embryology, comparative anatomy, evolutionary history and biogeography of fossil and living "bowfin" fishes of the world (family Amiidae) from 200 million years before present to today. During the last two years he has traveled all over the world for this project, conducting research at museums in England, France, Belgium, Germany, Italy, Spain, Israel, Russia, Mexico and numerous places in the U.S. He will visit Norway and Tokyo early next year to complete the project.

NOON BALLOON

The Noon Balloon for September 12, 1995 was given by **Dr. Scott Lidgard,** Associate Curator, Fossil Invertebrates, Department of Geology. Scott's topic, "The role of predation in Bryozoan evolution", summarized his most recent research project. He compared the major groups of bryozoans in terms of the morphology of the individual zooid, colony formation and their paleontological record, before introducing a vast array of bryozoan predators. An individual zooid uses muscles attached to its exterior surface wall to exert an hydrostatic force to evert its polyp-like body for feeding. The surface wall or frontal membrane is quite simple in the paraphyletic lineage of anascans, while it is covered by numerous spines in cribrimorphs. Ascophorans have a calcified frontal surface with a hole, an operculum, at one end covering the frontal membrane. Scott considered each basic morphology to represent an increase in morphological complexity, which he then related to patterns of increasing diversity found in the fossil record. This pattern of increased coverage of the frontal membrane has traditionally been interpreted as increasing protection against predation. Scott then grouped modern predators of bryozoans in terms of their mode of feeding as either colony browzers or individual zooid feeders. Browzers such as fishes are not selective and may remove a large portion of a colony in a single feeding event. Other browzers such as starfish and spiny urchins remove smaller portions of a colony, but when present in large numbers will completely devastate it. Chiton also browze a colony but on a smaller scale. The category of individual zooid predators includes many less well-known invertebrates such as sea slugs, sea spiders, certaincopeopods, flat worms, ribbon worms and nematodes. Scott noted many of the morphological specializations employed by these predators. Evidence of predation in the fossil record of bryozoans is quite scarce and due in part to the fact that individual zooid feeders do not alter that portion of the animal that would normally be fossilized, i.e., no evidence of their feeding remains. However, Scott did note instances where microscopic examination of fossils does allow one to infer predation, such as circular holes that appear to have been drilled into the zooid, or an indication of a regrowth pattern surrounded by typical zooids. Although increasing calcification of the frontal wall would seem to relate to anti-predation, Scott noted the serious difficulties inherent in moving an inference based on

pattern(s) into the realm of documentation of the underlying process. He also discussed many of the sources of bias in the fossil and modern record that may seriously skew ones perception of the data. Scott concluded with a consideration of bryozoan defense mechanisms as one of the most exciting new directions for research. He noted recent work of others in isolating a number of byrozoan secondary metabolites that are toxic to other animals. Scott's presentation was followed by an extensive discussion during which he underscored the difficulties in seperating selective pressures due to predation from environmental and ecological factors.

UNDERGRADUATE LAB EXERCISE DEVELOPED

A laboratory exercise for undergraduates using The Field Museum's *DNA to Dinosaurs* and *Teeth, Tusks and Tar Pits* exhibits has been developed by **Petra Sierwald** (Zoology, Insects) **Rüdiger Bieler** (Zoology, Invertebrates) and **Richard Blob**, graduate student, University of Chicago. The laboratory exercise contains a) a package with background information focusing on basic evolutionary concepts and an abbreviated "History of Animal Life"; b) a lab report with twelve exercises using various parts of the exhibits. The laboratory exercise was "tested" by some eighty undergraduate students during the spring quarter. Most students did very well in the lab and only a few revisions were required. If you wish to receive a copy, please contact Petra (x841).

VERTEBRATE PALEONTOLOGY FIELD TRIP '95

John Flynn, **Steve McCarroll** (both Geology) and crew recently returned from The Field Museum's 1995 fossil vertebrate collecting expedition to southwest Wyoming. This year's trip included a week of paleomagnetic sample collection and prospecting for fossil vertebrates in the Bridger Formation. This year was the first year for collecting fossils from the lower Bridger, and coverage of paleomagnetic samples now encompasses almost all of the formation. After a week in the Bridger and a cold early morning bath at Flaming Gorge National Recreation Area, they moved to the Washakie Formation and continued prospecting for fossil vertebrates. Highlights of this year's Washakie prospecting include a rhino skull found by **Bill Turnbull** (Geology), numerous artiodactyl specimens (ancient relatives of modern cows, deer, elk, etc.), a small crocodile skull, and a large crocodile lower jaw. In addition, numerous mammal teeth and postcranial bones were collected. Participants in this year's trip included: Doreen Covey, a graduate student at University of Illinois at Chicago, Paul Markwick and Janet Cushing, both graduate students at University of Chicago, Robin Whatley, Bill and Hedy Turnbull, Doug Jewell, Jeff Hoke, Tamara Biggs and her two daughters Geneva and Katie, and John's family -- Alison, Rachael and Peter.

Steve, John and Bill currently have two papers in press dealing with the Washakie Basin research. One is a general overview of the paleomagnetic stratigraphy and biostratigraphy, to be published in a Cambridge University volume entitled "The Terrestrial Eocene-Oligocene Transition in North America." The second paper reviews the Washakie Formation's perissodactyls and their biostratigraphic significance, and will be published in *Fieldiana: Geology*. In addition, Bill is nearing completion of a review of the uintatheres, and Steve is finishing up a report on the fauna from the upper portion of the formation. Other papers in progress or planned include reviews of the primates, artiodactyls, marsupials, carnivores and the fauna from the lower portion of the formation.

The *Natural News* is edited by **Carolyn Klyce** in the President's Office. The deadline for all submissions is Tuesday at noon. Printed on recycled paper.